



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,941	01/22/2004	Trevor J. Darrell	MIT-154PUS	5964

22494 7590 10/10/2008  
DALY, CROWLEY, MOFFORD & DURKEE, LLP  
SUITE 301A  
354A TURNPIKE STREET  
CANTON, MA 02021-2714

EXAMINER
----------

MISLEH, JUSTIN P

ART UNIT	PAPER NUMBER
----------	--------------

2622

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

10/10/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@dc-m.com  
amk@dc-m.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/762,941	<b>Applicant(s)</b> DARRELL ET AL.	
	<b>Examiner</b> JUSTIN P. MISLEH	<b>Art Unit</b> 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 9 - 28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9 - 28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 15, 2008 has been entered.

### ***Response to Arguments***

2. Applicant's arguments filed July 15, 2008 have been fully considered but they are not persuasive.

3. With respect to Claims 9, 25, and 25, Applicant argues, "Applicants fail to understand where or how Aarnio teaches the concept of having the server in communication with the PDA initiate a further image search of additional databases on other computers when a matching image is not available on the server."

4. In response, the Examiner again notes, "Noda et al. do not explicitly teach to search for additional images of interest location on other computers connected to the network when an image of interest is not located on the server." See Final Office (mailed January 15, 2008), page 16. The Examiner additionally notes, the purpose of Noda et al. is to retrieve an image. Noda does not teach stopping an image search when an image is not found. Thus, Noda et al. likely

Art Unit: 2622

settle for the best match. For this reason, it would be desirable to expand the computer network for searching.

5. In case of Aarnio, the secondary reference, the computer network for searching is not expanded to just a few more computers; rather it is expanded to the Internet. This teaching provides at least some teaching and suggestion that one with ordinary skill in the art would have likely incorporated the teachings of Aarnio to arrive at the claimed invention.

6. For this reason, the rejection of Claim 9 will be maintained and equally applicable to Claims 25 and 26, which recite corresponding storage medium and method claims, respectively.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 9 – 22 and 24 – 28** are rejected under 35 U.S.C. 103(a) as being unpatentable over Noda et al. in view of Aarnio (US 6,522,889).

**NOTES:** The Examiner notes **Claims 9, 25, and 26** appear to be related as apparatus, storage medium, and method respectively. Accordingly, these claims will grouped together under one rejection using the language of **Claim 9**. Furthermore, the Examiner's above-response is fully incorporated in the rejections below. Finally, the Examiner notes that the storage medium claimed in Claim 25 is not described in the specification. Claim 25 has been directed towards a storage medium since its original filing. To be clear as to whether the "storage

Art Unit: 2622

medium” is directed towards statutory subject matter, a paragraph should be added to specification including the types of statutory storage mediums that can be included. The paragraph should be consistent with the remainder of the specification and should not include any new matter.

9. For **Claims 9, 25, and 26**, Noda et al. explicitly teach:

A system to provide location awareness services comprising:

(a) a handheld device (digital camera, PDA, PHS, Figure 1) comprising:

(i) a camera to capture an image of an location (digital camera, Figure 1);

(ii) a mobile communication device (PHS, Figure 1), coupled to the camera and to a wireless network (WWW sever, Figure 1), to communicate the image to a server with existing image files to find similar images (page 25, abstract, lines 8-12) by locating and comparing the captured image with other existing image files; and

(iii) a user interface (PDA, Figure 1), coupled to the mobile communication device, to communicate to an user any resulting relevant images and associated hyperlinks of found similar images (page 28, 3.5 and Figure 5); and

(b) a computer network including the wireless network (WWW server, Figure 1) and a wired network (flower database, Figure 2);

(c) a server (see Figure 1), connected to the computer network, to store images of interest; and

(c) a plurality of computers (WWW server and flower database, Figure 1), each computer have a plurality of computer files and connected to the computer network (process information files and flower information files respectively), at least one of the computer files having an

Art Unit: 2622

image similar to the captured image and when viewed includes associated text describing an object in the image (page 26, paragraph 3, lines 8-13, see also Figure 5).

The Examiner respectfully notes, as described by item 3 (Image Retrieval System of Flowers), Noda uses characteristics entered by a user to generate a binary image of the captured image (see 3.1), then calculates the characteristics of shape using a circularity measure (as defined by equation 1; see 3.2), then calculates the characteristics of color using a center of gravity calculation (see 3.3). Noda combines these characteristics into a table (see Table 1) and compares them to characteristics of other images in the database to find a match(s) (see 3.4). Once a match(s) is found, the image(s) is displayed on a webpage and the matched image(s) and URL of the webpage is sent to the user (see 3.5 and 2).

However, Noda et al. do not explicitly teach to search for additional images of interest located on other computers connected to the network when an image of interest is not located on the server.

In the same field of endeavor, Aarnio teaches a method and apparatus for providing precise location information through a communications network (Figures 1 and 3). Aarnio further teaches that the database to be accessed is a computer network 18, which may be the Internet, or World Wide Web (column 2, lines 57-60), which includes several databases that can then be checked.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the computer network found in Aarnio as the database in Noda et al. in order to pinpoint an exact location of the image by using the vast sources of the internet (column 1, lines 35-39).

Art Unit: 2622

10. As for **Claim 10**, Noda et al explicitly teach:

The system to provide location awareness services as recited in Claim 9 wherein the user interface comprises a display (PDA, browser Figure 1, see also Figure 5).

11. As for **Claim 11**, Noda et al explicitly teach:

The system to provide location awareness services as recited in Claim 9 wherein the user interface comprises a computer connection (PDA connects to computers wirelessly through PHS, Figure 1).

12. As for **Claim 12**, Noda et al. explicitly teach:

The system to provide location awareness services as recited in Claim 9 wherein the associated text describes features of the object in the image including geographical location of the object (page 28, 3.5).

13. As for **Claim 13**, Noda et al. explicitly teach:

The system to provide location awareness services as recited in Claim 9 wherein the associated text describes features of the object in the image including a description and historical facts regarding the object (page 28, 3.5).

14. As for **Claim 14**, Noda et al. explicitly teach:

The system to provide location awareness services as recited in Claim 9 wherein the associated text includes a uniform resource locator (URL) (Figure 5, the word detail is considered the URL because when it is clicked the web address corresponding to the link is opened and seen in Figure 6).

15. As for **Claim 15**, Noda et al explicitly teach:

Art Unit: 2622

The system to provide location awareness services as recited in Claim 9, wherein at least one of the computers includes a plurality of computer files having images of fields of interest (flower database Figure 1).

However, Noda et al. do not explicitly teach that the database has information of locations of interest located within a predetermined radius about a geographical location.

In the same field of endeavor, Aarnio teaches a method and apparatus for providing precise location information through a communications network (Figures 1 and 3). Aarnio further teaches a server service 24 that provides information to the user about the surroundings in the geographical region (column 4, lines 33-38).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the information about the geographical surroundings found in Aarnio into the images found in the database of Noda et al. in order to provide a convenience for the user such as in a case described in column 4, lines 38-43.

16. As for **Claim 16**, the combination of Noda et al. in view of Aarnio, as applied to claim 15, further teaches the system to provide location awareness services as recited in Claim 15 wherein the computer having a plurality of computer files having images of objects of interest located within a predetermined radius about a geographical location (column 4, lines 33-38, Aarnio) was previously trained to find common objects known to be of interest (page 26-28, 3-3.5 explains the finding of common images).

17. As for **Claim 17**, Noda et al. explicitly teach:

The system to provide location awareness services as recited in Claim 9 wherein at least one of the computers includes at least one computer file having an image of an object of known



Art Unit: 2622

interest and an associated image of an object of less recognized interest within a predetermined radius about a geographical location of the known interest object (section 3.1 describes the extraction of the flower, which is the isolation of the image and at the same time the isolation of the surroundings, therefore it is inherent that the surroundings can be used to identify an object of less interest using the same methods describe in the experimentation with real images 4.1) to aid a user in finding the object of less recognized interest.

18. As for **Claim 18**, Noda et al. explicitly teach:

The system to provide location awareness services as recited in Claim 9 wherein at least one of the computers includes at least one computer file having an image of an object of known interest and an associated image of an object of less recognized interest within the field of view of the known interest object (section 3.1 describes the extraction of the flower, which is the isolation of the image and at the same time the isolation of the surroundings, therefore it is inherent that the surroundings can be used to identify an object of less interest using the same methods describe in the experimentation with real images 4.1) to aid a user in finding the object of less recognized interest.

19. As for **Claim 19**, Noda et al explicitly teach the system to provide location awareness services as recited in Claim 9, which includes at least one computer (flower database Figure 1).

However, Noda et al. do not teach that the computer has the capability of searching other computers to find matching files.

In the same field of endeavor, Aarnio teaches a method and apparatus for providing precise location information through a communications network (Figures 1 and 3). Aarnio further teaches that the database to be accessed is a computer network 18, which may be the

Art Unit: 2622

Internet, or World Wide Web (column 2, lines 57-60), which includes several computers that can then be checked.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the computer network found in Aarnio as the database in Noda et al. in order to pinpoint an exact location of the image by using the vast sources of the internet (column 1, lines 35-39).

20. As for **Claim 20**, the combination of Noda et al. in view of Aarnio, as applied to claim 19, further teaches that the text that is found describing a matching image is communicated to the handheld device (page 25, 2.1, end of second paragraph).

21. As for **Claim 21**, the combination of Noda et al. in view of Aarnio, as applied to claim 19, further teaches that the text is returned to the computer that began the search (Figure 4, in Aarnio, shows that the information that is found is returned to the mobile system, which is the computer that began the search).

22. As for **Claim 22**, the combination of Noda et al. in view of Aarnio, as applied to claim 21 above further teaches the system to provide location awareness services as recited in Claim 21 wherein the computer that initiated the search is capable of comparing the original image with images returned in the computer file having text matching the associated text describing the object in the image (see figures 5 and 6, the PDA provides the user with the comparison of images that resulted from the original computer, database, to the image).

23. As for **Claim 24**, the combination of Noda et al. in view of Aarnio, as applied to claim 19, further teaches the system to provide location awareness services as recited in Claim 19 wherein at least one of the computers includes at least one computer file having an image of an

Art Unit: 2622

object of known interest and an associated image of an object of less recognized interest within the field of view of the known interest object (section 3.1 describes the extraction of the flower, which is the isolation of the image and at the same time the isolation of the surroundings, therefore it is inherent that the surroundings can be used to identify an object of less interest using the same methods describe in the experimentation with real images 4.1) to aid a user in finding the object of less recognized interest all located within a predetermined radius about a geographical location.

24. As for **Claim 27**, Noda et al. explicitly teach: The method for identifying a location as recited in Claim 26 wherein the comparing step includes comparing at least one of energy spectrum data, color histogram data, primitive filter data, and local invariant data (pages 26-38, 3-3.4 mentions color characteristic extraction).

25. As for **Claim 28**, Noda et al. explicitly teach: The method for identifying a location as recited in claim 26 wherein the comparing step comprises at least one of the techniques including a least square matching technique, a normalizing the image technique, an eigen value technique, a matching histogram of image feature technique and an image matching engine with transformation technique (pages 27-28, 3.4).

26. **Claim 23** is rejected under 35 U.S.C. 103(a) as being unpatentable over Noda et al. in view of Aarnio (US 6,522,889) and further in view of Reed (US/2005/0113113).

27. As for **Claim 23**, the combination of Noda et al. in view of Aarnio teaches the system to provide location awareness services as recited in claim 15.

Art Unit: 2622

However, the combination does not explicitly teach that the system includes a GPS system receiver to identify the geographical location of the mobile communication device and help eliminate non-useful images.

In the same field of endeavor, Reed teaches an enhance wireless phone (Figure 2). Reed further teaches that this wireless phone has a GPS system 26, which is described in paragraph [0114]. The GPS system locates the user and inherently would provide coordinates that could narrow down the image matching process.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include the GPS capabilities of the mobile phone found in Reed into the system found in the combination of Noda et al. in view of Aarnio in order to pinpoint exact locations and provide the user with the ease of mind of always knowing their location.

### ***Conclusion***

28. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Justin P Misleh whose telephone number is 571.272.7313. The Examiner can normally be reached on Monday through Friday from 8:00 AM to 5:00 PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Sinh Tran can be reached on 571.272.7564. The fax phone number for the organization where this application or proceeding is assigned is 571.273.8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

Art Unit: 2622

applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**/Justin P. Misleh/  
Primary Examiner  
Group Art Unit 2622  
October 9, 2008**